APPENDIX A1: PENDING CLAIMS (CLEAN COPY)

60. (Amended) An isolated polypeptide comprising a member selected from the group consisting of

(a) an amino acid sequence comprising one of SEQ ID NOs:2, 4, 6 or 8; and

(b) an immunogenic fragment of at least 15 amino acids that matches an aligned contiguous segment of SEQ ID NOs:2, 4, 6 or 8; selected from the following contiguous segments thereof:

1-15; 2-16; 3-17; 4-18; 5-19; 6-20; 7-21; 8-22; 9-23; 10-24;11-25; 12-26; 13-27; 14-28; 15-29; 16-30; 17-31; 18-32; 19-33; 20-34; 21-35; 22-36; 23-37; 24-38; 25-39; 26-40; 27-41; 28-42; 29-43; 30-44;31-45; 32-46; 33-47; 34-48; 35-49; 36-50; 37-51; 38-52; 39-53; 40-54; 41-55; 42-56; 43-57; 44-58; 45-59; 46-60; 47-61; 48-62; 49-63; 50-64; 51-65; 52-66; 53-67; 54-68; 55-69; 56-70; 57-71; 58-72; 59-73; 60-74; 61-75; 62-76; 63-77; 64-78; 65-79; 66-80; 67-81; 68-82; 69-83; 70-84; 71-85; 72-86; 73-87; 74-88; 75-89;76-90; 77-91; 78-92; 79-93; 80-94; 81-95; 82-96; 83-97; 84-98; 85-99; 86-100; 87-101; 88-102; 89-103; 90-104; 91-105; 92-106; 93-107; 94-108; 95-109; 96-110; 97-111; 98-112; 99-113; 100-114;101-115; 102-116; 103-117; 104-118; 105-119; 106-120; 107-121; 108-122; 109-123; 110-124;111-125; 112-126; 113-127; 114-128; 115-129; 116-130; 117-131; 118-132; 119-133; 120-134;121-135; 122-136; 123-137; 124-138; 125-139; 126-140; 127-141; 128-142; 129-143; 130-144;131-145; 132-146; 133-147; 134-148; 135-149; 136-150; 137-151; 138-152; 139-153; 140-154;141-155; 142-156; 143-157; 144-158; 145-159; 146-160; 147-161; 148-162; 149-163; 150-164;151-165; 152-166; 153-167; 154-168; 155-169; 156-170; 157-171; 158-172; 159-173; 160-174;161-175; 162-176; 163-177; 164-178; 165-179; 166-180; 167-181; 168-182; 169-183; 170-184;171-185; 172-186; 173-187; 174-188; 175-189; 176-190; 177-191; 178-192; 179-193; 180-194;181-195; 182-196; 183-197; 184-198; 185-199; 186-200; 187-201; 188-202; 189-203; 190-204;191-205; 192-206; 193-207; 194-208; 195-209; 196-210; 197-211; 198-212; 199-213; 200-214;201-215; 202-216; 203-217; 204-218; 205-219; 206-220; 207-221; 208-222; 209-223; 210-224;211-225; 212-226; 213-227; 214-228; 215-229;

APPENDIX A1: PENDING CLAIMS (CLEAN COPY) – (continued)

216-230; 217-231; 218-232; 219-233; 220-234;221-235; 222-236; 223-237; 224-238; 225-239; 226-240; 227-241; 228-242; 229-243; 230-244;231-245; 232-246; 233-247; 234-248; 235-249; 236-250; 237-251; 238-252; 239-253; 240-254; 241-255; 242-256; 243-257; 244-258; 245-259; 246-260; 247-261; 248-262; 249-263; 240-264; 251-265; 252-266; 253-267; 254-268; 255-269; 256-270; 257-271; 258-272; 259-273; 260-274; 261-275; 262-276; 263-277; 264-278; 265-279; 266-280; 267-281; 268-282; 269-283; 270-284; 271-285; 272-286; 273-287; 274-288; 275-289; 276-290; 277-291; 278-292; 279-293; 280-294;281-295; 282-296; 283-297; 284-298; 285-299; 286-300; 287-301; 288-302; 289-303; 290-304; 291-305; 292-306; 293-307; 294-308; 295-309; 296-310; 297-311; 298-312; 299-313; 300-314; 301-315; 302-316; 303-317; 304-318; 305-319; 306-320; 307-321; 308-322; 309-323; 310-324; 311-325; 312-326; 313-327; 314-328; 315-329; 316-330; 317-331; 318-332; 319-333; 320-334; 321-335; 322-336; 323-337; 324-338; 325-339; 326-340; 327-341; 328-342; 329-343; 330-344; 331-345; 332-346; 333-347; 334-348; 335-349; 336-350; 337-351; 338-352; 339-353; 340-354; 341-355; 342-356; 343-357; 344-358; 345-359; 346-360; 347-361; 348-362; 349-363; 350-364; 351-365; 352-366; 353-367; 354-368; 355-369; 356-370; 357-371; 358-372; 359-373; 360-374; 361-375; 362-376; 363-377; 364-378; 365-379; 366-380; 367-381; 368-382; 369-383; 370-384; 371-385; 372-386; 373-387; 374-388; 375-389; 376-390; 377-391; 378-392; 379-393; 380-394; 381-395; 382-396; 383-397; 384-398; 385-399; 386-400; 387-401; 388-402; 389-403; 390-404; 391-405; 392-406; 393-407; 394-408; 395-409; 396-410; 397-411; 398-412; 399-413; 400-414; 401-415; 402-416; 403-417; 404-418; 405-419; 406-420; 407-421; 408-422; 409-423; 410-424; 411-425; 412-426; 413-427; 414-428; 415-429; 416-430; 417-431; 418-432; 419-433; 420-434; 421-435; 422-436; 423-437; 424-438; 425-439; 426-440; 427-441; and 428-442;

wherein the immunogenic fragment, when administered to a subject in a suitable composition which can include an adjuvant, or a suitable carrier coupled to the polypeptide, raises an immune response that recognizes a polypeptide having the sequence of SEQ ID NOs: 2, 4, 6 or 8.

APPENDIX A1: PENDING CLAIMS (CLEAN COPY) – (continued)

61. The isolated polypeptide of Claim 60 wherein the isolated polypeptide comprises the amino acid sequence of SEQ ID NOs:2, 4, 6 or 8.

62. The isolated polypeptide of claim 61 wherein the isolated polypeptide consists of the amino acid sequence of SEQ ID NOs:2, 4, 6 or 8.

63. (Amended) A fusion protein comprising the isolated polypeptide of Claim 60 and a polypeptide selected to:

(a) provide T helper epitopes;

(b) facilitate purification of the isolated polypeptide from recombinant expression systems; or

(c) stabilize the isolated polypeptide during recombinant expression.

64. An immunogenic composition comprising the polypeptide of Claim 60 and a pharmaceutically acceptable carrier.

65. (Amended) The immunogenic composition of Claim 64, wherein the composition comprises at least one other *Moraxella catarrhalis* antigen.

66. (Amended) The isolated polypeptide of claim 60, wherein the isolated polypeptide comprises the immunogenic fragment selected from the contiguous segments as set forth in (b).

67. An immunogenic composition comprising the polypeptide of Claim 66 and a pharmaceutically acceptable carrier.

APPENDIX A1: PENDING CLAIMS (CLEAN COPY) – (continued)

88. (Amended) The immunogenic composition of Claim 87, wherein the composition comprises at least one other *Moraxella catarrhalis* antigen.

89. (Amended) A fusion protein comprising the isolated polypeptide of claim 86 and a polypeptide selected to:

(a) provide T helper epitopes;

(b) facilitate purification from a recombinant expression system, or

(c) stabilize the isolated polypeptide during recombinant expression.

APPENDIX B1: REPLACEMENT PARAGRAPHS (CLEAN COPY)

Change 1: Please replace the three paragraphs beginning at page 15, line 27 through page 16, line 24 with the following text:

A coding region of BASB034 gene may be isolated by screening using a DNA sequence provided in SEQ ID NO:1, 3, 5 or 7 to synthesize an oligonucleotide probe. A labeled oligonucleotide have a sequence complementary to that of a gene of the invention is then used to screen a library of cDNA, genomic DNA or mRNA to determine which members of the library the probe hybridizes to.

There are several methods available and well known to those skilled in the art to obtain full-length DNAs, or extend short DNAs, for example those based on the method of Rapid Amplification of cDNA ends (RACE) (see, for example, Frohman, *et al., PNAS USA 85:* 8998-9002, 1988). Recent modifications of the technique, exemplified by the Marathon™ technology (Clontech Laboratories Inc.) for example, have significantly simplified the search for longer cDNAs. In the Marathon™ technology, cDNAs have been prepared from mRNA extracted from a chosen tissue and an 'adaptor' sequence ligated onto each end. Nucleic acid amplification (PCR) is then carried out to amplify the "missing" 5′ end of the DNA using a combination of gene specific and adaptor specific oligonucleotide primers. The PCR reaction is then repeated using "nested" primers, that is, primers designed to anneal within the amplified product (typically an adaptor specific primer that anneals further 3′ in the adaptor sequence and a gene specific primer that anneals further 5′ in the selected gene sequence). The product of this reaction can then be analyzed by DNA sequencing and a full-length DNA constructed either by joining the product directly to the existing DNA to give a complete sequence, or carrying out a separate full-length PCR using the new sequence information for the design of the 5′ primer.

D2 cont'd

APPENDIX B1: REPLACEMENT PARAGRAPHS (CLEAN COPY) – (continued)

D2 Cancld

The polynucleotides and polypeptides of the invention may be employed, for example, as research reagents and materials for discovery of treatments of and diagnostics for diseases, particularly human diseases, as further discussed herein relating to polynucleotide assays.

Change 2: Please replace the paragraph at page 24, line 21 through page 25, line 4 with the following text:

D3

The polynucleotides of the invention may be used as components of polynucleotide arrays, preferably high density arrays or grids. These high density arrays are particularly useful for diagnostic and prognostic purposes. For example, a set of spots each comprising a different gene, and further comprising a polynucleotide or polynucleotides of the invention, may be used for probing, such as using hybridization or nucleic acid amplification, using probes obtained or derived from bodily sample to determine the presence of a particular polynucleotide sequence or related sequence in an individual. Such a presence may indicate the presence of a pathogen, particularly *Moraxella catarrhalis*, and may be useful in diagnosing and/or prognosing disease or a course of disease. A grid comprising a number of variants of the polynucleotide sequence of SEQ ID NO:1, 3, 5 or 7 are preferred. Also preferred is a grid comprising a number of variants of a polynucleotide sequence encoding the polypeptide of SEQ ID NO:2, 4, 6, or 8.